Phytologia (October 1993) 74(4):330-332.

FIRST RECORD OF *HYDRILLA VERTICILLATA* (L. f.) ROYLE (HYDROCHARITACEAE) FROM THE LESSER ANTILLES

David E. Lemke

Department of Biology, Southwest Texas State University, San Marcos, Texas 78666 U.S.A.

&

Roland Roberts

Grenada National College, Tanteen, St. George's, Grenada, West Indies

ABSTRACT

The aquatic weed *Hydrilla verticillata* (L. *f.*) Royle (Hydrocharitaceae) is reported from a volcanic crater lake on the Caribbean island of Grenada. Our collection represents the first record of this species from the Lesser Antilles.

KEY WORDS: *Hydrilla verticillata*, Hydrocharitaceae, Grenada, Lesser Antilles, Caribbean

Hydrilla verticillata (L. *f.*) Royle is a submersed hydrophyte widely regarded as a pernicious weed of aquatic ecosystems in many regions of the world (Langeland 1990). The sole species in the genus, *H. verticillata* is widely distributed in the Old World, having been collected from Africa, Asia, Australia, and New Zealand, various islands in the Pacific and Indian oceans, and a few disjunct stations in northern Europe. The native range of *Hydrilla* is unknown, although Cook & Lüönd (1982) believe that its center of origin lies in the warmer regions of Asia.

The first New World record of *Hydrilla* was from Florida, U.S.A., in 1960 (Allen 1976). The species has since spread to all of the Gulf and Atlantic coast states as far north as Maryland and Delaware and is also known from Tennessee, Iowa, Arizona, and California (Cook & Lüönd 1982; Langeland 1990). In Central America, *Hydrilla* has been reported from the Canal Zone

of Panamá, and in the Caribbean it is known from Jamaica in the Greater Antilles (Cook & Lüönd 1982).

Howard (1979) noted earlier reports of *Egeria densa* (Planch.) Casp., a superficially similar species of Hydrocharitaceae, from the islands of Guadeloupe and Martinique in the Lesser Antilles, but made no mention of the occurrence of *Hydrilla* in that region. In September, 1991, we collected specimens of *H. verticillata* on the island of Grenada, providing the first documented evidence for the occurrence of the species in the Lesser Antilles.

Specimen collected: GRENADA. St. Andrew Parish, in shallow water near the small pier along the southern margin of Grand Etang, Grand Etang Forest Reserve, 22 Sep 1991, *Lemke & Roberts 3461* (SWT).

Our material was collected in shallow water (approximately 1 m deep) along the margin of Grand Etang, a natural lake formed in the crater of an extinct volcano. Although Cook & Lüönd (1982) report that populations of *Hydrilla verticillata* from tropical regions are usually monoecious, whereas those from more temperate climates are typically dioecious, the Grenadian plants bore only pistillate flowers. Asexual propagules, or turions, were also noted on some individuals.

We can only speculate as to how *Hydrilla* may have been introduced to Grenada. In the United States, the plant is most commonly spread by boat trailers or bait buckets, or by being dumped from home aquariums (Langeland 1990). Since Grand Etang is not used for recreational purposes and there is no significant aquarium trade in Grenada, long distance dispersal by avian vectors may be the most plausible explanation. In support of this idea, Langeland (1990) reports that the turions of *H. verticillata* have been shown to survive ingestion and regurgitation by various waterfowl species.

ACKNOWLEDGMENTS

We would like to thank Guy Nesom and T.P. Ramamoorthy (TEX) for their critical reviews of the manuscript.

LITERATURE CITED

Allen, G.E. 1976. Investigations and current status of insect enemies as biological control agents of aquatic weeds. Pp. 299-306 in: C.K. Varshney & J. Rzóska (eds.), *Aquatic Weeds in Southeast Asia.* Junk, The Hague, The Netherlands.

Cook, C.D.K. & R. Lüönd. 1982. A revision of the genus *Hydrilla* (Hydrocharitaceae). Aquatic Botany 13:485-504.

Howard, R.C. 1979. *Flora of the Lesser Antilles*, vol. 3: Monocotyledonae. Arnold Arboretum, Jamaica Plain, Massachusetts. 586 pp.

Langeland, K.A. 1990. *Hydrilla.* A continuing problem in Florida waters. Cooperative Extension Service Circular No. 884, Institute of Food and Agricultural Sciences, University of Florida, Gainesville, Florida. 21 pp.